

# Syllabus for Microsoft .NET 4.5



## Course Duration for Microsoft .NET Training Course

- **12 weeks**

## Objective For Microsoft .NET Training Course

- **To become a Professional Software Programmer**
- **To improve Placeability**

## Eligibility for Microsoft .NET Training Course

- **Any Technical Graduates (BSc, BCS, BCA, BE, B Tech, MSc, MCS, MCA, M Tech)**
- **Basic knowledge of Programming**

## Course overview For Microsoft .NET Training Course

### C# .NET 4.5

#### Introduction of .NET

- Introduction of .NET 4.5 Framework
- CLR
- CTS
- MSIL
- Garbage Collection

#### Concept Of Assemblies

- Assemblies
- Assembly Content
- Assembly types

#### Programming in C#

- Introduction of C#
- Language Features
- Variables, expressions and type conversions
- Flow control
- Loops
- Functions
- Boxing and Unboxing
- Arrays

#### Object Oriented Programming

- Object Oriented Concepts
- Defining classes, class members
- Access modifiers, Implementation of class
- Interfaces, properties

#### Collection Framework

- Classes in Collection Framework
- Interfaces in Collection Framework
- Inheritance
- Types of inheritance

#### Handling Exceptions in C#

- Exception handling
- Regular Expression

#### Delegates and Events in C#

- Delegates
- Types of Delegates
- Event Handling

## ASP.NET 4.5

### Introduction of .NET

- Introduction of .NET 4.5 Framework
- CLR
- CTS
- MSIL
- Garbage Collection

### Introduction to Windows Programming using C#

- Windows Programming
- Windows Controls
- Common Controls
- Container Controls
- Menus and Toolbars
- Printing
- Dialogs
- Deploying Windows Application
- Deployment Overview

### ASP .NET Controls and Graphics

- Introduction to ASP.NET
- ASP.Net Web Server Controls
- ASP.Net Page Life Cycle
- User Controls in ASP.Net
- Navigation Control
- Validation Control
- Login Controls
- Dynamic Graphics
- Basic Drawing
- Drawing a custom image
- Placing custom images inside Web Pages
- Image Format and Quality

### Cascading Style Sheet (CSS)

- Introduction of Cascading Style Sheet
- Working with CSS
- Types of Style Sheet

### Master and Content Pages in ASP.NET

- Creating Master and Content Pages
- Simple Master Page, Netsed Master Page
- Configuring Master Page Creating Themes
- Applying Themes

### State Management in ASP.NET

- ASP.Net State Management
- Using View State
- Session state and application state
- Using cookies and URL encoding
- ASP.Net Web Application Security
- Authentication
- Authorization
- Impersonation
- ASP.Net provider model
- Caching
- Output Caching
- Data Caching

### Basics of Networking

- Networking overview
- Networking programming options
- Webclient
- Web request and Web response
- Toplistener and Topclients

## Fundamentals of Database

### SQL

- SQL
- Components of SQL
- Basic SQL Commands
- Triggers and Views
- ADO.Net
- Database Connectivity
- Data Binding
- Data bound controls

### LINQ

- Introduction of LINQ
- LINQ Queries
- Standard Query operators
- LINQ to ADO.NET
- Lambda Expressions
- LINQ to XML

## Advanced Technologies (AJAX, JQuery, MVC, Web Services)

### AJAX Technology

- Introduction of AJAX
- AJAX Server Controls
- Creating AJAX Application using ASP.NET
- ASP.NET AJAX Controls Toolkit

### jQuery

- Introduction to jQuery
- jQuery UI Library
- Working of jQuery
- Functions used in jQuery

### Working with MVC

- Introduction of MS.Net MVC Framework
- MVC Architecture
- How to start an ASP.NET MVC application
- The folders and files for a new MVC application
- Working with Views
- Working with controls

### Web Services

- Web Services and Deployment
- Introduction to WCF, WPF and WF
- Creating a new WCF Service
- Using on click deployment
- Creating Web API Service

## Project on ASP.NET

Student will be assigned a project which they will have to execute under the guidance of the faculty.